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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/710,130

06/21/2004

Jinhua Huang

146903

4129

23413

7590

06/14/2005

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EXAMINER

DONOVAN, LINCOLN D

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EV

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/710,130		HUANG ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Lincoln Donovan		2832	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 and 24-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 21-23 and 28-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>06-24-04</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

Claims 16-20 and 24-27 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claimed species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 04-06-05.

Applicant's election with traverse of the restriction in the reply filed on 04-06-05 is acknowledged. The traversal is on the ground(s) that the search for invention of embodiments 7-8 is related to that of embodiments 1-6. This is not found persuasive because the specific layering and orientation necessitates further search and/or considerations.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 15 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. [US 2004/0246083] in view of Abele et al. [US 5,475,355].

Regarding claims 1-7, and 21-23, Aoki et al. discloses a magnetic field generating device comprising:

- a plurality of permanent magnet blocks [24] each having north end and a south end aligned in the same north-south orientation configured to have a surface at the north polarity end and a surface at the south polarity end; and
- a layer of ferromagnetic material [26] securely disposed at one of the surfaces of the permanent magnet arrangement [paragraph 42].

Aoki et al. disclose everything claimed except the specific thickness of the ferromagnetic material.

Abele et al. discloses a magnetic field generating device [figure 1] having a permanent magnet arrangement [16, figure 5] with a unilayer ferromagnetic material [20] disposed thereon whose thickness is selected based on the desired characteristics of the arrangement [column 19, lines 54-65].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the thickness of the ferromagnetic layer, as suggested by Abele et al. in Aoki et al., since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 8-11, Aoki et al. discloses the use of a permanent magnetic shim [32, 40, figure 2] disposed opposing the layer. The specific polarity and number of shims used would have been an obvious design consideration dependent upon the intended region of interest and flux leakage.

Regarding claims 12-13, Aoki et al. disclose the layer being secured with an adhesive [column 4, lines 43-48].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to also use an adhesive to secure the shims in order to simplify attachment thereof.

Regarding claim 15, Aoki et al., as modified, disclose everything claimed except the specific magnetic field variation.

The specific magnetic field variation would have been an obvious design consideration based on the specific application of the magnetic field generating device and necessary accuracy thereof.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al., as modified, as applied to claim 1 above, and further in view of Aoki et al. [US 6,794,973].

Aoki et al., as modified, disclose everything claimed except the layer being segmented.

Aoki et al. '973 disclose a segmented shimming layer [figure 1a] used in a magnetic field generating device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the layered design of Aoki et al. '973 for the unilayer of Aoki et al., as modified, in order to provide a specific thickness.

Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al., as modified, as applied to claim 1 above, and further in view of Aoki et al. [US 6,275,128].

Regarding claims 28-31, Aoki et al., as modified, disclose everything claimed except the layer including a non-ferromagnetic shim plate with a plurality of pockets accommodating magnetic shims.

Aoki et al. '128 discloses a magnetic field generating device [figure 1] having a non-ferromagnetic shim plate [13] with a plurality of pockets [12] accommodating magnetic shims [15] integrally formed with a ferromagnetic plate [11].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the shimming design of Aoki et al. '128, with Aoki et al., as modified, in order to readily adjust the shimming of the assembly.

### ***Conclusion***

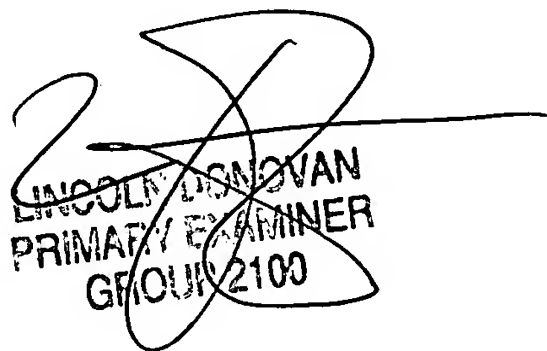
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lincoln Donovan whose telephone number is 571-272-1988. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Enad Elvin can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ldd

  
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